

Appl. No. 10/649,019
Amdt. dated April 24, 2006
Reply to Office Action of January 25, 2006

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (original) A vehicle lock controller installed in a vehicle having a plurality of doors to control locking of the doors through communication with a portable device, the vehicle lock controller comprising:

a plurality of transmitting circuits, each provided in association with a corresponding one of the doors to output a request signal and request the portable device to transmit a response signal; and

a control unit connected to the transmitting circuits to intermittently output the request signal from each of the transmitting circuits at a predetermined cycle, wherein when receiving the response signal from the portable device, the control unit unlocks the door corresponding to the transmitting circuit that outputs the request signal to which the response signal is transmitted in response, the control unit determining a priority order of the transmitting circuits to set the predetermined cycle of the request signal output from each transmitting circuit in accordance with the priority order.

2. (original) The vehicle lock controller according to claim 1, wherein the control unit shortens the predetermined cycle of the request signal in transmitting circuits having a higher priority.

3. (original) The vehicle lock controller according to claim 1, wherein the control unit determines the priority order of the transmitting circuits based on how often each door is used and shortens the predetermined cycle of the request signal in transmitting circuits corresponding to doors that are often used.

4. (original) The vehicle lock controller according to claim 1, wherein the control unit decreases an output intensity of the request signal in transmitting circuits having a lower priority

Appl. No. 10/649,019
Amdt. dated April 24, 2006
Reply to Office Action of January 25, 2006

when a voltage value of a battery installed in the vehicle becomes lower than a predetermined threshold value.

5. (currently amended) The vehicle lock controller according to claim 1, wherein the control unit decreases ~~a ratio of~~ a total output time of the request signals in a predetermined time when a voltage value of a battery installed in the vehicle becomes lower than a predetermined threshold value.

6. (original) The vehicle lock controller according to claim 5, wherein the control unit stops outputting the request signal from transmitting circuits having a lower priority when the voltage value of the battery becomes lower than the threshold value.

7. (original) A vehicle lock controller installed in a vehicle having a plurality of doors to control locking of the doors through communication with a portable device, the vehicle lock controller comprising:

a plurality of transmitting circuits, each provided in association with a corresponding one of the doors to output a request signal and request the portable device to transmit a response signal; and

a control unit connected to the transmitting circuits to intermittently output the request signal from each of the transmitting circuits at a predetermined cycle, wherein when receiving the response signal from the portable device, the control unit unlocks the door corresponding to the transmitting circuit that outputs the request signal to which the response signal is transmitted in response, the control unit detecting how often each door is used and stopping the output of the request signal from transmitting circuits that are seldom used when a voltage value of a battery installed in the vehicle becomes lower than a predetermined threshold value.

8. (original) A method for controlling locking of a plurality of doors for a vehicle through communication with a portable device, the vehicle including a plurality of transmitting circuits, each provided in association with a corresponding one of the doors to output a request signal and request the portable device to transmit a response signal, the method comprising the

Appl. No. 10/649,019
Amdt. dated April 24, 2006
Reply to Office Action of January 25, 2006

steps of:

intermittently outputting the request signal from each of the transmitting circuits at a predetermined cycle;

when receiving the response signal from the portable device, unlocking the door corresponding to the transmitting circuit that output the request signal to which the response signal is transmitted in response;

setting the priority order of the transmitting circuits; and

setting the cycle of the request signal output from each transmitting circuit in accordance with the priority order.

9. (original) The method according to claim 8, wherein the step for setting the cycle of the request signal includes shortening the predetermined cycle of the request signal in transmitting circuits having a higher priority.

10. (original) The method according to claim 8, wherein the step of setting the priority order includes:

detecting how often each door is used; and

determining the priority order of the transmitting circuits based on how often each door is used.

11. (original) The method according to claim 10, wherein the step of setting the priority order includes shortening the predetermined cycle of the request signal in transmitting circuits corresponding to doors that are often used.

12. (original) The method according to claim 8, further comprising the step of:

decreasing an output intensity of the request signal in transmitting circuits having a lower priority when a voltage value of a battery installed in the vehicle becomes lower than a predetermined threshold value.

Appl. No. 10/649,019

Amdt dated April 24, 2006

Reply to Office Action of January 25, 2006

13. (currently amended) The method according to claim 8, further comprising the step of:

decreasing ~~a ratio of~~ a total output time of the request signals in a predetermined time when a voltage value of a battery installed in the vehicle becomes lower than a predetermined threshold value.

14. (original) The method according to claim 13, wherein the step for decreasing a ratio of a total output time includes stopping output of the request signal from transmitting circuits having a lower priority when the voltage value of the battery becomes lower than the threshold value.